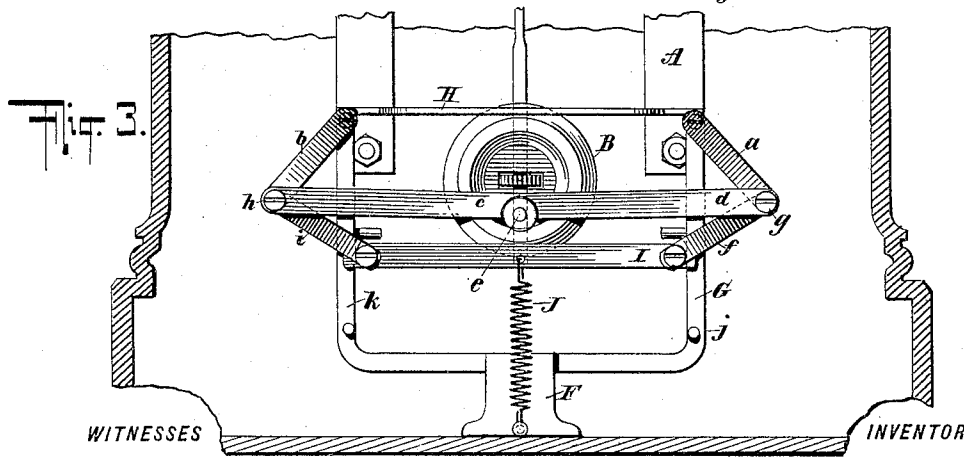
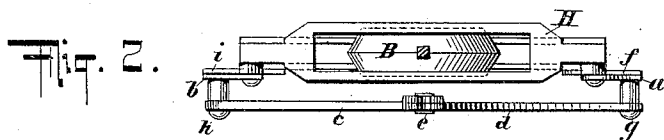
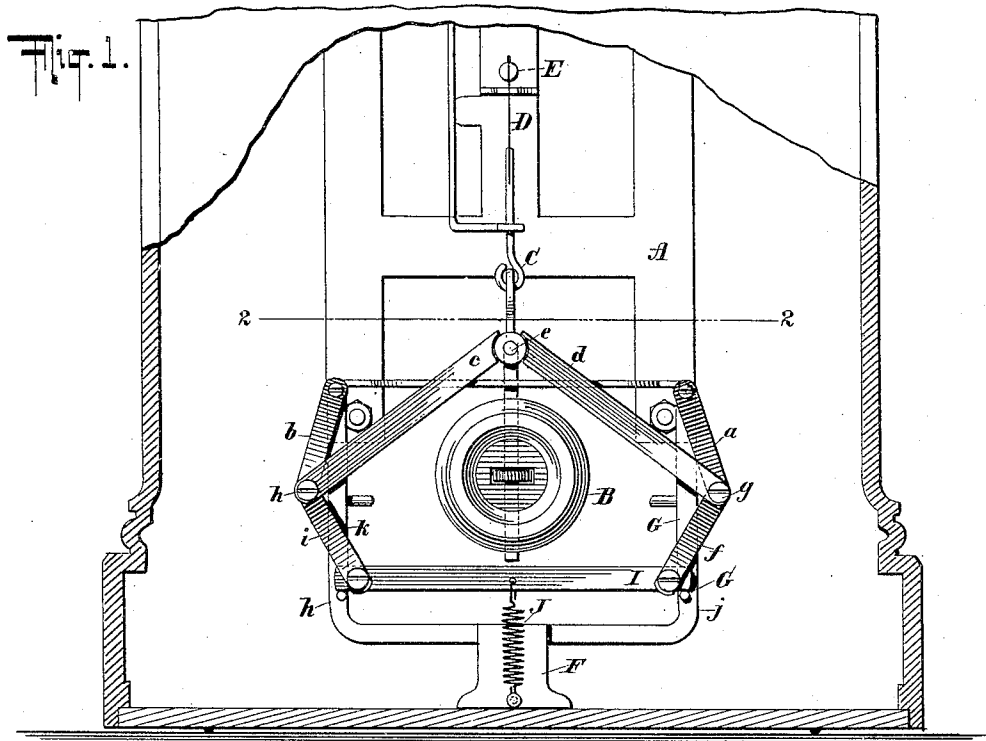


F. KROEBER.
PENDULUM CLAMP FOR CLOCKS.

No. 576,587.

Patented Feb. 9, 1897.



WITNESSES
Gustave Dietrich.
Geo. O. Munn.

INVENTOR
Florence Kroeber
BY *Briesen Knautz*
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

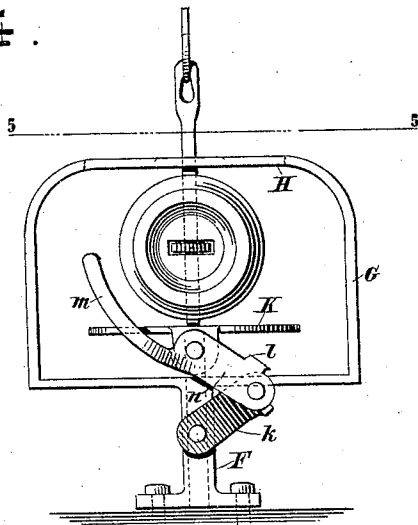


Fig. 5.

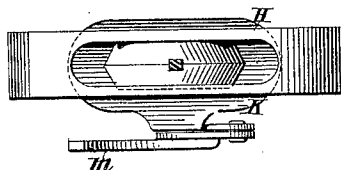
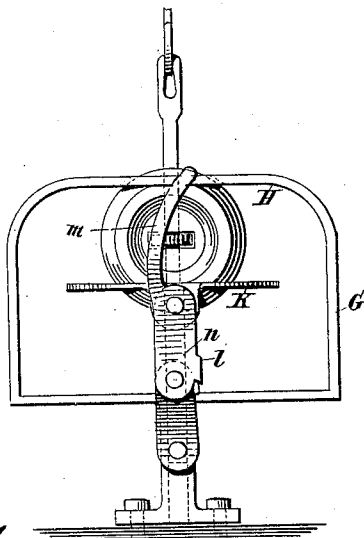


Fig. 6.



WITNESSES

Gustave Dietrich
Geo. A. Morse

INVENTOR

Florence Kroeber
BY *Briesen & Mantz*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FLORENCE KROEBER, OF NEW YORK, N. Y.

PENDULUM-CLAMP FOR CLOCKS.

SPECIFICATION forming part of Letters Patent No. 576,587, dated February 9, 1897.

Application filed August 22, 1896. Serial No. 603,577. (No model.)

To all whom it may concern:

Be it known that I, FLORENCE KROEBER, a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Pendulum-Supporters, of which the following is a specification.

My invention relates to pendulum-supporters, and has for its object to produce a device which will lift and support the pendulum, taking the weight of the same off the pendulum-rod and tension-spring, so that the clock may be transported with the pendulum in place.

To this end my invention consists in the construction hereinafter set forth and claimed.

In the drawings, Figure 1 is a front or face view of a pendulum-support made in accordance with my invention. Fig. 2 is a sectional plan view of Fig. 1, the section being taken on line 2 2 of Fig. 1; and Fig. 3 is a similar view of the same, showing its closed position. Fig. 4 is a front or face view of a pendulum-support constituting another form of my invention. Fig. 5 is a sectional plan view thereof, the section being taken on line 5 5 of Fig. 4; and Fig. 6 is a front face view or elevation similar to Fig. 4, showing the pendulum-supporter in its elevated position.

In the drawings, Figs. 1 to 3, A indicates a clock-movement from which a pendulum B is suspended by the ordinary suspension or pendulum rod C, and the suspension-spring D, which works freely up and down in the suspension-post E. It is well known that the suspension-spring D is very delicate, and a jar imparted to the pendulum-ball is liable to cause the spring D to be torn by the pin which passes therethrough and rests on the top of the slot of the suspension-post E. Especially is this liable to happen when the clock is shipped with the pendulum in place. By my invention I obviate this danger by raising the pendulum-ball to take the weight off the suspension-spring and at the same time securely clamping the pendulum-ball to prevent it from moving after it has been lifted, so that the pendulum will be securely held from all movement. This device I have illustrated in the drawings, wherein F is a post carrying a yoke G, whose top cross-bar H is slotted for the passage of the pendulum-rod C and for the passage of the upper edge

of the pendulum-ball B when the same has been lifted. Pivoted to the top of the yoke are toggle-levers *a b*, to which a pair of toggle links or levers *c d* are pivoted by one end and pivoted together at *e*. Pivoted to the ends of the links or levers *a d* is a link or lever *f*, the said three levers being pivoted together at a common point *g*. Pivoted to the common junction or pivotal point *h* of the levers *b c* is a lever *i*. Working on the side bars *j k* of the yoke G is a sliding cross-bar I, to which bar the links *i f* are pivoted by their lower ends. The spring J is interposed between the bar I and the standard F. The operation of this form of my invention is as follows:

Supposing the parts to be in the position shown in Fig. 1 and it is desired to lift and clamp the pendulum, the toggle-links *c d* are forced downward, thereby forcing their lower ends apart and bearing upon the toggle-links *b i* and *a f*, so as to raise the bar I to cause the same to lift the pendulum-ball, so that the pendulum-ball will be firmly gripped between the bars H I, thereby being secured from movement and being supported by the bar I, so that none of the weight of the ball comes on the pendulum-rod or the suspension-spring D.

In Figs. 4, 5, and 6 I have illustrated a modification of my invention. In these figures, F indicates the base or standard of the yoke G, as in the former case, and H the top cross-bar thereof, which top cross-bar is slotted, as before, for the reception of the pendulum-ball when it is raised. Pivoted to the standard F is a toggle-link *k*, to which is pivoted a toggle-link *l*, which link *l* is prolonged to form a handle *m*. This link *l* is also pivoted to a platform or cross-bar K, which platform is slotted for the reception of the lower edge of the pendulum-ball and provided with a guide-rod *n*, (shown in dotted lines in Figs. 4 and 6,) which works in the bore of the standard F.

Supposing the parts to be in the position shown in Fig. 4 and it is desired to lift and clamp the pendulum-ball, the arm *m* is thrown to the right, thereby bringing the toggle-links in line with each other, causing the platform K to lift the ball. As the platform K continues to rise the parts get in the position shown in Fig. 6, wherein the ball is shown as

lifted by a platform K and gripped between the platform K and the upper cross-bar II of the yoke G.

What I claim, and desire to secure by Letters Patent, is—

1. A pendulum-supporter consisting of a combined lifting and clamping means for lifting and clamping the pendulum to hold the same from moving.
2. The combination of an upper cross-bar and a lower cross-bar or platform, and means for raising or lowering the said lower cross-bar or platform, whereby the lower cross-bar or platform will raise the pendulum-ball and bring it against the upper cross-bar, whereby the pendulum-ball will be held between the cross-bars.
3. A pendulum-supporter comprising the combination of a stationary upper cross-bar, with an up and down moving lower cross-bar, whereby the rising cross-bar will lift the said pendulum and force it against the upper cross-bar, whereby the pendulum will be held between the cross-bars.
4. A pendulum lifter and supporter comprising the combination of a plurality of slotted cross-bars, the lower of which is movable, and means for raising and lowering the lower cross-bar, whereby the pendulum will be gripped by the slotted portions of the bars.
5. The combination of an upper cross-bar, a lower cross-bar, and means for raising and lowering the lower cross-bar to raise and grip the pendulum comprising one or more pairs

of toggle-links and an operating-lever therefor, substantially as described.

6. In a pendulum-supporter, the combination of a stationary part located above the pendulum-ball and adapted to be engaged by the said pendulum-ball, a movable part located below the said pendulum-ball and adapted to engage the said pendulum-ball to raise the said pendulum-ball and force it against the stationary part, and means for raising and lowering the movable part in a vertical direction whereby the movable part will force the pendulum against the stationary part, the said two parts constituting a combined means for raising the pendulum and gripping the same to relieve the suspension-spring of the strain of the weight of the pendulum-ball.

7. An auxiliary pendulum-supporting device, comprising pendulum-ball-grasping devices arranged to grasp and hold the pendulum-ball and to lift the same so that the weight of the pendulum-ball will be supported by the said pendulum-ball-grasping devices.

8. A pendulum-ball-supporting device consisting of a plurality of pendulum-ball engaging and lifting means adapted to seize and lift the pendulum-ball clear of its normal supports.

FLORENCE KROEBER.

Witnesses:

W. VON SCHLEPEGRELL,
CHAS. KROEBER.